**Internal Lab**

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Section : 3CS C

Subject : Computer Graphics Lab (RCS 653)

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**Aim :-** WAP in C to create a circle using Mid-Point circle algorithm.

**Code :-**

#include<stdio.h>

#include<graphics.h>

// function for drawing circle

void drawcircle(int x0, int y0, int radius)

{

int x = radius;

int y = 0;

int err = 0;

while (x >= y)

{

putpixel(x0 + x, y0 + y, 7);

putpixel(x0 + y, y0 + x, 7);

putpixel(x0 - y, y0 + x, 7);

putpixel(x0 - x, y0 + y, 7);

putpixel(x0 - x, y0 - y, 7);

putpixel(x0 - y, y0 - x, 7);

putpixel(x0 + y, y0 - x, 7);

putpixel(x0 + x, y0 - y, 7);

if (err <= 0)

{

y += 1;

err += 2\*y + 1;

}

if (err > 0)

{

x -= 1;

err -= 2\*x + 1;

}

}

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Main Function Starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

int main()

{

int gd=DETECT, gm, error,x,y,r;

initgraph(&gd, &gm, "");

printf("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("\t Name - Sandeep Kumar Shukla \n\t RollNo. - 1729010140 \n\t 3CS C \n");

printf("\t Internal Lab \n\t Computer Graphics (RCS 653)\n ");

printf("\n\n\t P-3: WAP in C to create a circle using Mid-Point circle algorithm. \n\n");

printf("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("\nEnter radius of circle: ");

scanf("%d", &r);

printf("Enter co-ordinates of center(x and y): ");

scanf("%d%d", &x, &y);

drawcircle(x, y, r); //Calling drawcircle() function by giving parameter.

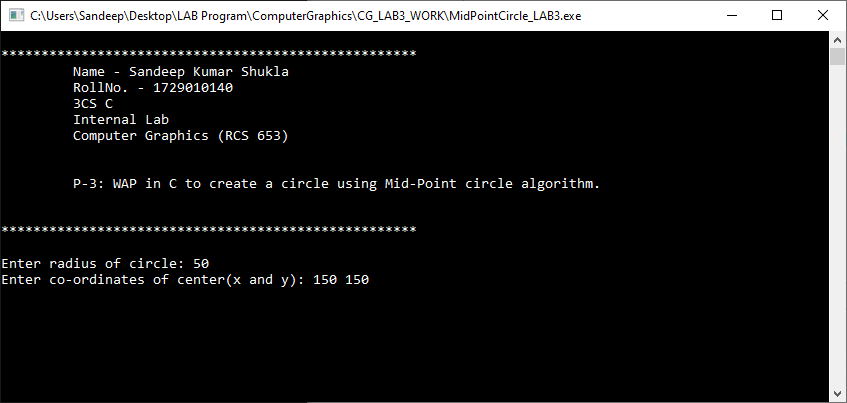
getch();

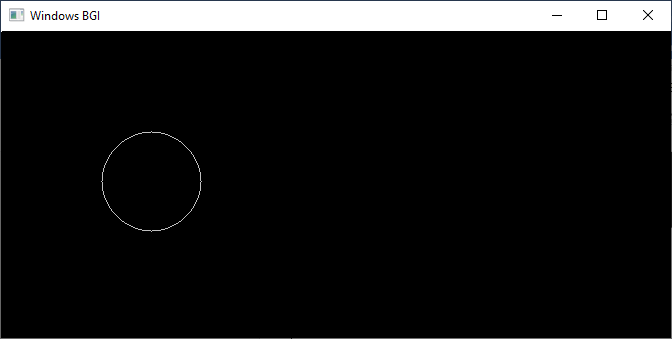
closegraph();

return 0;

}

**Output :-**

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